

REMARKS

The rejections:

under 35 U.S.C. § 102(b) of Claims 2, 4, 6-9, 11, 13, and 15 as anticipated by U.S. 6,045,896 (Boire et al), and

under 35 U.S.C. § 103(a) of:

Claims 7-8 as unpatentable over Boire et al in view of U.S. 5,723,075 (Hayasaka et al);

Claim 14 as unpatentable over Boire et al in view of U.S. 5,595,825 (Guiselin); and

Claim 22 as unpatentable over Boire et al in view of U.S. 4,565,719 (Phillips et al), are respectfully traversed.

The present invention relates to a laminate having titanium oxide layers and its production method.

As described in the specification under "Background Art," beginning at page 1, line 6, laminates having metal layers laminated on a transparent substrate such as glass have been widely used for window glass in buildings and automobiles, for example, for purposes of suppressing emission of heat rays and as a shielding material to suppress leakage of electromagnetic waves radiating from an apparatus such as a plasma display. At the same time, a high visible light transmittance and a low visible light reflectance is required, as well as a preferred reflection color tone. For this purpose, it is well known to use a laminate having a layer construction wherein dielectric material layers and metal layers are alternately laminated one on another. A low heat ray emissivity alone can be obtained by making the metal layer thick, but this may cause a decrease in the visible light transmittance and increase in the visible light reflectance, and the wavelength range in which a low reflectance can be obtained in the visible light region tends to be narrow, whereby a preferred reflection color tone may be impaired. The above unfavorable phenomenon that the reflection color tone is

impaired can be somewhat diminished by using a high refractive index material such as titanium oxide as the dielectric material layer, or by increasing the number of laminations. However, when using such a laminate with titanium oxide layers, visible light transmittance tends to decrease, and further, the rate of decrease in the visible light transmittance tends to increase together with the increase in the number of laminations. The present invention addresses these problems.

As recited in above-amended Claim 11, the present invention is a laminate which comprises a substrate, and a titanium oxide layer, a metal layer and a titanium oxide layer laminated alternately in this order on the substrate in  $(2n + 1)$  layers (wherein  $n$  is a positive integer), wherein an interlayer having a refractive index of less than 2.4 at a wavelength of 550 nm is interposed at at least two interlaminar boundaries between the titanium oxide layer and the metal layer, wherein each interlayer independently is a layer consisting of at least one member selected from the group consisting of a nitride, an oxynitride, a carbide, a boride, niobium oxide, GZO, and ITO, wherein each metal layer independently is a layer containing silver as the sole or main component, wherein the thickness of each interlayer independently is from 0.1 to 30 nm, wherein the titanium oxide layer closest to the substrate and the titanium oxide layer furthest from the substrate each independently has a thickness of from 20 to 60 nm, and all other titanium oxide layers each independently has a thickness of from 40 to 120 nm, and which laminate contains at least two metal layers.

The present invention seeks to maximize visible ray transmittance. For this, the interface between the titanium oxide layer and the metal layer has significance. As described in the paragraph in the specification bridging pages 8 and 9:

In a constitution wherein titanium oxide layers and metal layers are alternately laminated, when the number of lamination is increased, the wavelength width in which a low reflectance can be obtained in the visible light region will increase. However, it was confirmed that the tendency of decrease in transmittance becomes significant along with increase in the number of lamination, more than expected from

optical interference effect. The present inventors have conducted extensive studies on this phenomenon and as a result, found that the decrease in transmittance occurs at the interface between the titanium oxide layer and the metal layer. This phenomenon is estimated to be light absorption due to surface plasmon excited by light irradiation in the inside of the metal layer, particularly in the vicinity of the interface with the titanium oxide layer, and it is considered that formation of the surface plasmon can be suppressed to reduce the decrease in transmittance by interposing a layer having a refractive index lower than that of the titanium oxide as an interlayer.

Accordingly, it is unnecessary to increase the thickness of the interlayer to be more than required based on cost considerations. Further, by setting the thickness of the interlayer as described above, the reflectance can be lowered, whereby a wavelength range for obtaining low reflectance can be widened.

In addition, Examples 1-131 and Comparative Examples 1-16 in the specification support the patentability of the presently-claimed invention.

Boire et al is drawn to addressing a problem resulting from heat treating so-called silver-type low-emissivity or solar-protection glazing assemblies, which heat treating causes various optical defects, as disclosed generally at columns 1 and 2. Particularly, Boire et al is drawn to a glazing assembly comprising at least one transparent substrate provided with a stack of thin layers which includes an alternation of  $n$  functional layer(s) having reflection properties in the infrared and/or in solar radiation, in particular of an essentially metallic nature, and of  $(n+1)$  "coatings", with  $n \geq 1$ , wherein the "coatings" are composed of a layer or a plurality of layers, at least one of which is made of a dielectric material, and the functional layers and the coatings are arranged so that the (each) functional layer is placed between two coatings (paragraph bridging columns 2 and 3). Boire et al further discloses (column 3, lines 8-23):

With a view to preserving the optical quality of the stack in the case where the substrate once provided with the stack is subjected to a heat treatment of the toughening, bending, annealing type:

on the one hand, the coating placed on top of the functional layer, or on top of one of the functional layers, and in the latter case preferably

the nth layer, includes at least one "barrier" layer made of a material capable of forming a barrier at least to oxygen and water; and  
on the other hand, at least one "absorbent" or "stabilizing" layer made of a material capable of "absorbing" or "stabilizing" the constituent material of the said functional layer forms part of:  
either the coating placed on top of the functional layer and under the "barrier" layer;  
or the coating placed under the said functional layer.

Boire et al discloses that in addition to providing the barrier layer on top of the functional layer, it may also be placed under the functional layer when the barrier layer is made of a material capable of preventing the migration of oxygen and water from the ambient atmosphere into the functional layer (column 4, lines 1-15); that the functional layers are made of silver or a metal alloy containing silver (column 5, lines 16-19), although no such metal alloys are exemplified; that their invention applies not only to a single functional layer placed between two coatings, but also to a plurality of functional layers, in particular two functional layers alternating with three coatings, or three functional layers alternating with four coatings (paragraph bridging columns 4 and 5). Boire et al lists various exemplary materials for their barrier layer and absorbent or stabilizing layers, respectively. With regard to the disclosure of a titanium oxide therein, it is listed among various oxides which may be present as a porous layer, having a porosity of at least 2% and acting as an absorbent layer (column 5, line 59 through column 6, line 20), or as a layer that surmounts the barrier layer or at least one of the barrier layers (column 7, lines 19-25). These are the only disclosures of a titanium oxide in Boire et al.

All embodiments of the present invention require at least three titanium oxide layers, one of said titanium oxide layers being laminated on the substrate; Claim 13 requires at least four titanium oxide layers.

As stated in *In re Arkley*, 172 USPQ 524, 526 (CCPA 1972) (copy of record):

[R]ejections under 35 U.S.C. 102 are proper only when the claimed subject matter *is* identically disclosed or described in "the prior art." Thus, for the instant rejection under 35 U.S.C. 102(e) to have been proper, the . . . reference must clearly and unequivocally disclose the claimed [subject matter] or direct those skilled in the art to the [subject matter] without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the *similarity* of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection.

Boire et al does not meet the *Arkley* test. At the very least, picking, choosing and combining various disclosures not directly related to each other would be required in order to meet the terms of the present claims. In addition, and as now discussed, even such picking and choosing would not result in any of the presently-claimed inventions.

It is not seen how one skilled in the art would derive from Boire et al a laminate wherein a titanium oxide layer is laminated on the substrate therein, regardless of whether titanium oxide is chosen as a porous absorbent layer therein, or as a dielectric layer surmounting a barrier layer. Moreover, even if Boire et al's disclosure could be stretched to include such an embodiment, the number of possible combinations of layers, resulting from the many alternatives disclosed by Boire et al, runs into the thousands. In addition, none of the examples in Boire et al use a titanium oxide layer. Thus, under the rationale of *In re Baird*, 29 USPQ 2d 1550 (Fed. Cir. 1994) (copy enclosed<sup>1</sup>), no *prima facie* case of obviousness has been made out.

The Examiner relies on Figure 1 of Boire et al, but incorrectly characterizes it. For example, the Examiner characterizes Figure 1 as "a dielectric oxide layer (2a)," and finds that layer (2a) can be titanium oxide, thus broadening Boire et al's disclosure of layer (2a) to be inclusive of any dielectric oxide. In all of Boire et al's examples, layer (2a) is made of tin

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<sup>1</sup> A copy is enclosed in view of the Examiner's finding that a copy was not enclosed with the previous amendment.

oxide. However, the only disclosure in Boire et al wherein tin oxide and titanium oxide are interchangeable, is with regard to a layer of dielectric material that surmounts the barrier layer or at least one of the barrier layers (column 7, lines 19-25). Since layer (2a) is the first layer on the substrate, it is clear that layer (2a) is not intended to be the layer of dielectric material that surmounts the barrier layer or at least one of the barrier layers. In other words, the tin oxide performs another function, such as absorbent layer material according to a second embodiment (column 6, line 37). Based on the disclosure at column 8, lines 9-12, it appears that the tin oxide of layer 2a is intended to play the same role as  $\text{Si}_3\text{N}_4$ .

In addition, and contrary to the finding by the Examiner, there is no first barrier layer comprising silicon nitride between layers (2a) and (2b) in Figure 1. As described beginning at column 9, line 39, layer (2a) is made of  $\text{SnO}_2$  and layer (2b) is made of  $\text{ZnO}$ . Neither of these layers constitute a barrier layer, based on the disclosure that the barrier layer has a refractive index between 1.7 and 2.5, and is in particular based on a silicon compound or a carbide (column 5, lines 20-37).

In sum, the Examiner has relied on disparate disclosures in Boire et al in order to come up with a modified structure for Figure 1 of Boire et al that is simply not supported by Boire et al.

Regarding Claims 7-8, Hayasaka et al discloses heat wave shielding materials comprising dimerized thiourea derivatives as near-infrared absorbents (column 14, lines 21-35). However, that such materials are known in the art does not in and of itself provide the requisite motivation to provide such a film on the glazing assembly of Boire et al. Without the present disclosure as a guide, one skilled in the art would not have combined Boire et al and Hayasaka et al.

Regarding Claim 14, while the Examiner relies on Guiselin's disclosure that increasing the number of metal film layers in a stack enables the solar protection to be

optimized, Guiselin also discloses that increased metal film layers leads to a reduction in transparency of the pane, which manifests itself in a decrease in the value of the light transmission  $T_L$  of the pane (column 1, lines 30-32). In addition, the invention of Guiselin includes only three layers having infrared reflection properties, i.e., three metal, such as silver, layers. Indeed, Guiselin actually teaches away from the addition of further metal layers.

Regarding Claim 22, while Phillips et al discloses a metal layer of either silver or a silver-palladium alloy in an energy control sheet, the Examiner has not established that the degradation upon heat treatment addressed in Boire et al would manifest itself when the functional layer is a silver-palladium alloy. Without such a disclosure, one skilled in the art would not have employed a silver-palladium alloy as the functional layer(s) of Boire et al.

The Examiner has responded to only some of the above arguments.

Regarding Applicants' citation of the *Arkley* case, the Examiner finds that Applicants have failed to show or attempt to show specific disclosures of Boire et al which are not directly related to each other.

In reply, Applicants have pointed out various disclosures not directly related to each other, and indeed, have noted the Examiner's misinterpretation of Boire et al. In addition, the claims now require that the titanium dioxide layers be within specific thickness ranges. Boire et al discloses that the layers in Boire et al which may contain titanium oxide have a thickness of either between 2 and 30 nm (column 6, line 4), or between 0.5 and 20 nm (column 7, lines 33-34). Thus, Boire et al does not disclose any embodiment wherein a titanium dioxide layer is present having a thickness of at least 40 nm, as now required by Claim 11.

Regarding the *Baird* case, the Examiner finds that it is not clear which rationale thereof Applicants are referring.

In reply, Applicants rationale is clearly stated in the above paragraph which cites the *Baird* case.

In response to Applicants' arguments with regard to Boire et al's disclosure of layer (2a), the Examiner appears to concede that it is not a layer that can contain titanium dioxide. Titanium dioxide is not disclosed in Boire et al as a barrier layer material. This difference in and of itself distinguishes the present invention over Boire et al.

Regarding the Examiner's combination of Boire et al and Hayasaka et al, the Examiner finds that one of ordinary skill in the art would have combined these references to endow Boire et al's article with a near infra-red absorbing property.

In reply, Boire et al desires reflection properties in the infra-red. The two properties would appear to be diametrically opposed.

Regarding the combination of Boire et al and Guiselin, and the combination of Boire et al Phillips et al, the Examiner has simply ignored the above arguments thereto.

In addition to all the above arguments, it is clear that the objects of the present invention and of Boire et al are different and unrelated. Indeed, as evident from the sheet resistance values in the Comparative Examples herein, sheet resistance does not rise even when an interlayer is not present, and it is proved that the metal (Ag) is not oxidized at the TiO<sub>2</sub>/Ag interface. The reason is due to the fact that the TiO<sub>2</sub> layer was formed by a method wherein most of the oxygen was supplied from a TiO<sub>x</sub> target, with O<sub>2</sub> as a reaction gas used in only a small amount at the time of the layer formation.

As evident from the Examples, the effect achieved by inserting an interlayer is the same regardless of whether it is inserted as the lower layer or the upper layer of the Ag layer. This means that this is essentially different from the function of a barrier layer to prevent Ag from being oxidized at the time of forming an oxide film on Ag.



Since heating is not carried out at the time of forming a layer in the Examples and the Comparative Examples herein, oxygen is not diffused from glass by heating, and Ag is not oxidized. Thus, the interlayer inserted as the lower layer of the Ag layer does **not** work as an oxidation-preventing layer.

When heating is not carried out after forming a layer as in the Examples and the Comparative Examples herein, diffusion of oxygen from the atmosphere is substantially prevented by the outermost TiO<sub>2</sub> layer. Such a thin interlayer as employed in the present Examples does not completely prevent diffusion of oxygen.

The property required for the interlayer of the present invention is such an **optical** property that the refractive index of the interlayer is lower than the TiO<sub>2</sub> layer as a dielectric material layer. Thus, the many Examples herein illustrate that various materials are usable, provided that this condition is satisfied.

Therefore, the interlayer of the present invention is not an oxidation-preventing layer for preventing oxidation of an Ag layer, and is essentially different from the barrier layer of Boire et al.

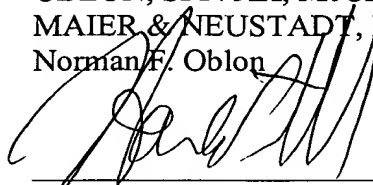
For all the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

Application No. 09/857,209  
Reply to Office Action of August 19, 2004

All of the presently pending and active claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to examine all claimed subject matter and, in the absence of further grounds of rejection, pass this application to issue with all pending claims.

Respectfully submitted,

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In re Baird (CA FC) 29 USPQ2d 1550

**In re Baird**

**U.S. Court of Appeals Federal Circuit  
29 USPQ2d 1550**

**Decided January 19, 1994  
No. 93-1262**

**Headnotes**

**PATENTS**

**1. Patentability/Validity -- Obviousness -- Relevant prior art -- Particular inventions  
(§ 115.0903.03)**

Application claim for flash fusible toner is not obvious in view of prior patent, even though generic diphenol formula of patent encompasses bisphenol A of claim, since disclosure of generic formula that may encompass claimed compound does not, without more, render compound obvious, and since generic diphenol formula of patent contains large number of variables and encompasses estimated 100 million different diphenols in addition to bisphenol, but patent does not suggest selection of specific variables to formulate that compound and specifically discloses diphenols which are different from, and more complex than, bisphenol A; prior patent's specific enumeration of derivatives of bisphenol A does not warrant contrary conclusion, since suggestion of certain complex bisphenol A derivatives does not describe or suggest bisphenol A itself and thus does not motivate its selection.

**Case History and Disposition:**

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Brian W. Baird, Art F. Diaz, William H. Dickstein and Charles M. Seymour, serial no. 07/333,524 (flash fusible toner resins). From decision upholding examiner's final rejection of claims 1-5 on ground of obviousness under 35 USC 103, applicants appeal. Reversed.

**Attorneys:**

John A. Brady, Lexington, Ky., for appellant.

Adriene B. Lepiane, assistant solicitor, PTO (Fred E. McKelvey, solicitor, and Richard E. Schafer, associate solicitor, with her on brief), for appellee.

**Judge:**

Before Michel, Plager, and Lourie, circuit judges.

**Opinion Text**

**Opinion By:**

Lourie, J.

Applicants Brian W. Baird, Art F. Diaz, William H. Dickstein, and Charles M. Seymour (collectively Baird) 1 appeal from the October 15, 1992 decision of the U.S. Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences, Appeal No. 92-0860, affirming the examiner's final rejection of claims 1-5 of application Serial No. 07/333,524, entitled "Flash Fusible Toner Resins," as unpatentable on the ground of obviousness under 35 U.S.C. Section 103 (1988). We reverse.

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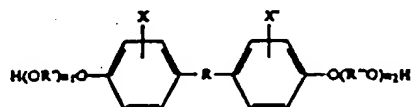
## BACKGROUND

Baird's application is directed to a flash fusible toner comprising a polyester of bisphenol A and an aliphatic dicarboxylic acid. Synthesis of the toner compositions involves the acetylation of bisphenol A and the reaction of that product with an aliphatic dicarboxylic acid selected from the group consisting of succinic acid, glutaric acid, and adipic acid. The application discloses that toners containing bisphenol A have optimal characteristics for flash fusing including, *inter alia*, high thermal stability and low critical surface energy.

Claim 1, the only claim at issue, reads as follows:

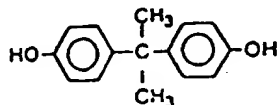
1. A flash fusible toner comprising a binder resin which is a bisphenol A polyester containing an aliphatic di [carboxylic] acid selected from the group consisting of succinic acid, glutaric acid and adipic acid.

Claim 1 stands rejected as obvious over U.S. Patent 4,634,649 to Knapp et al., which relates to developer compositions comprised of, *inter alia*, the polymeric esterification product of a dicarboxylic acid and a diphenol of the following generic formula:



wherein R is selected from substituted and unsubstituted alkylene radicals having from about 2 to about 12 carbon atoms, alkylidene radicals having from 1 to 12 carbon atoms and cycloalkylidene radicals having from 3 to 12 carbon atoms; R' and R'' are selected from substituted and unsubstituted alkylene radicals having from 2 to 12 carbon atoms, alkylene arylene radicals having from 8 to 12 carbon atoms and arylene radicals; X and X' are selected from hydrogen or an alkyl radical having from 1 to 4 carbon atoms; and each n is a number from 0 (zero) to 4.

Col. 4, lines 16-38. The Knapp formula contains a broad range of variables and thus encompasses a large number of different diphenols, one of which is bisphenol A, which is shown in Baird's application as having the following structure:



Knapp also discloses that the dicarboxylic acids have the general formula:

$\text{HOOC R}'' \text{ } ^n\text{COOH}$  wherein R'' is a substituted or unsubstituted alkylene radical having from 1 to 12 carbon atoms, arylene radicals or alkylene arylene radicals having from 10 to 12 carbon atoms and n is a number of less than 2.

Col. 5, lines 6-14. Twenty typical dicarboxylic acids are recited, including succinic acid, glutaric acid, and adipic acid, the dicarboxylic acids recited in claim 1.

The examiner rejected claim 1 as obvious on the ground that Knapp specifically discloses as components of his esters the three dicarboxylic acids recited in claim 1 and a generic formula which encompasses bisphenol A. Recognizing that bisphenol A is defined when certain specific variables are chosen, the examiner reasoned that bisphenol A "may be easily derived from the generic formula of the diphenol in [Knapp] and all the motivation the worker of ordinary skill in the art needs to arrive at the particular polyester of the instant claim[ ] is to follow [that formula]."

The Board upheld the examiner's rejection. It rejected Baird's argument that there was no motivation for one to select bisphenol A from Knapp and summarily concluded that "the fact that [the claimed] binder resin is clearly encompassed by the generic disclosure of Knapp . . . provides ample motivation for the selection of [the claimed composition]." Slip op. at 3. The Board's decision was affirmed on reconsideration.

## DISCUSSION

The only issue before us is whether the record supports the Board's conclusion that, in view of the teachings of Knapp, the claimed compounds 2 would have been obvious to one of ordinary skill in the art. We review an obviousness determination by the Board *de novo*, while we review underlying factual findings for clear error. *In re Beattie*, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed. Cir. 1992).

Baird does not dispute the fact that the generic diphenol formula of Knapp encompasses bisphenol A. Nor does Baird dispute that Knapp specifically discloses the three dicarboxylic acids recited in claim 1. Rather, Baird argues that there is no suggestion in Knapp to select bisphenol A from the vast

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number of diphenols covered by the generic formula and that the Board thus erred in concluding that the claimed compounds would have been obvious.

[1] What a reference teaches is a question of fact. *Beattie*, 974 F.2d at 1311, 24 USPQ2d at 1041. The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious. *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (rejecting Commissioner's argument that "regardless [ ] how broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it"). *Jones* involved an obviousness rejection of a claim to a specific compound, the 2-(2'-aminoethoxy)ethanol salt of 2-methoxy-3,6-dichlorobenzoic acid (dicamba), as obvious in view of, *inter alia*, a prior art reference disclosing a genus which admittedly encompassed the claimed salt. We reversed the Board's rejection, reasoning that the prior art reference encompassed a "potentially infinite genus" of salts of dicamba and listed several such salts, but

that it did not disclose or suggest the claimed salt. *Id.*

In the instant case, the generic diphenol formula disclosed in Knapp contains a large number of variables, and we estimate that it encompasses more than 100 million different diphenols, only one of which is bisphenol A. While the Knapp formula unquestionably encompasses bisphenol A when specific variables are chosen, there is nothing in the disclosure of Knapp suggesting that one should select such variables. Indeed, Knapp appears to teach away from the selection of bisphenol A by focusing on more complex diphenols, including 2,2-bis(4-beta-hydroxyethoxyphenyl) propane, 2,2-bis(4-hydroxypropoxyphenyl) propane, and 2,2-bis(4-hydroxyisopropoxyphenyl)propane. Col. 4, lines 51-64. Knapp teaches that in preferred diphenols, R has 2 to 4 carbon atoms and R' and R'' have 3 to 4 carbon atoms, and in "optimum" diphenols, R is an isopropylidene radical, R' and R'' are selected from the group consisting of propylene and butylene radicals, and n is one. Col. 4, lines 38-47. Knapp further states that the diphenol in the preferred polyester material is 2,2-bis(4-hydroxyisopropoxyphenyl)propane. Col. 5, lines 36-38. Fifteen typical diphenols are recited. None of them, or any of the other preferred phenols recited above, is or suggests bisphenol A.

The Commissioner repeatedly emphasizes that many of the diphenols specifically enumerated in Knapp are derivatives of bisphenol A. He argues that Knapp thus suggests the selection of bisphenol A itself. We disagree, because, according to the specification, the diphenol in the esters of claim 1 can only be bisphenol A, not a bisphenol A derivative. While Knapp may suggest certain complex bisphenol A derivatives, it does not describe or suggest bisphenol A and therefore does not motivate the selection of bisphenol A.

" [A] reference must be considered not only for what it expressly teaches, but also for what it fairly suggests." *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979). Given the vast number of diphenols encompassed by the generic diphenol formula in Knapp, and the fact that the diphenols that Knapp specifically discloses to be "typical," "preferred," and "optimum" are different from and more complex than bisphenol A, we conclude that Knapp does not teach or fairly suggest the selection of bisphenol A. *See In re Belle* 991 F.2d 781, 26 USPQ2d 1529 (Fed. Cir. 1993) (DNA sequence would not have been obvious in view of prior art reference suggesting a nearly infinite number of possibilities and failing to suggest why among all those possibilities one would seek the claimed sequence). A disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds.

## CONCLUSION

The Board clearly erred in finding that Knapp would have provided the requisite motivation for the selection of bisphenol A in the preparation of the claimed compounds. Accordingly, the decision of the Board affirming the rejection of claim 1 as obvious over Knapp is reversed.

## COSTS

No costs. *REVERSED*

### Footnotes

Footnote 1. The real party in interest is Lexmark International, Inc.

Footnote 2. Since the toner, the resin, and the polyester compounds appear to be treated in the Board opinion and patent application as synonymous, and the PTO has premised its obviousness rejection on the obviousness of the compounds, we will treat this case accordingly.

- End of Case -